ON A MODIFICATION OF THE EXTREMAL SHIFT METHOD FOR A SECOND-ORDER DIFFERENTIAL EQUATION IN A HILBERT SPACE

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A problem of tracking a solution of a second-order differential equation in a Hilbert space by a solution of another equation is considered. It is assumed that the first (reference) equation is subject to the action of an unknown control, which is unbounded in time. In the case when the current states of both equation are observed with small errors, a solution algorithm stable with respect to informational noises and computational inaccuracies is designed. The algorithm is based on N.N. Krasovskii's extremal shift method known in the theory of guaranteed control.

Keywords: tracking a solution, extremal shift, second-order equation.

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